sponders and 0.785 (0.012) for nonresponders. **CONCLUSIONS:** Utility values can be derived from condition-specific measures such as the QLQ-C30. Our analyses demonstrate that the presence of CS and splenomegaly in patients with myelofibrosis results in lower utility values.

PCN96

A SYSTEMATIC REVIEW OF HEALTH STATE UTILITIES IN PATIENTS WITH ADVANCED HEPATOCELLULAR CARCINOMA

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OBJECTIVES: To examine published evidence describing preference-based utility weights for hepatocellular carcinoma (HCC) in order to inform health gains within future economic evaluations in HCC. **METHODS:** The systematic review of utilities reported in the technology appraisal submission to the National Institute for Health and Clinical Excellence for sorafenib for advanced HCC (TA189) was updated. Studies that reported preference-based utility weights for HCC indexed in the EMBASE.com database were searched for and included. Bibliographic searching of included studies was conducted to retrieve any additional, relevant studies. Health technology assessments (HTA) submissions reporting relevant data were also included. **RESULTS:** Forty-eight published studies (with 13 primary studies reporting unique data) and two HTA submissions met the inclusion criteria. Four studies directly measured utility or quality of life (QoL) used to derive utility values of patients with HCC; instruments such as the EQ-5D and/or Health Utilities Index Mark Three, or free-standing techniques such as standard gamble or time trade-off (TTO) were employed. The two HTA submissions reported utility weights associated with HCC derived by mapping FACT-HEP clinical trial data to TTO utility values. One cross-study comparison of estimates highlighted that patients without the disease consider the utility associated with HCC to be lower (0.2-0.5) than patients with HCC (0.6-0.8). Utility weights were broadly similar across studies which directly measured utility from patients with HCC or which mapped QoL data from patients with HCC to utility weights, despite differences in study country and utility instrument. Four studies measured QoL using the SF-36 or FACT-G; all demonstrated that scores were lower for the general health perception domain than the other domains. **CONCLUSIONS:** Consistent with trends documented elsewhere in the literature, utility weights derived from patients with disease were generally higher than those derived from individuals without. There exists little variation in utility score by instrument applied.

PCN97

PREFERENCE SCORES FOR 6 TYPES OF CANCER USING FACT AND EQ-5D

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OBJECTIVES: Preference-based scoring approaches to measuring health-related quality of life (HRQL) in cancer are proliferating. The objective of this study was to compare preference-based scores estimated by scoring functions for the generic EQ-5D and cancer-specific Functional Assessment of Cancer Therapy (FACT) in terms of differences between algorithms and cancer subtype. **METHODS:** Secondary data analysis of patients with advanced cancer (breast, brain, colorectum, hepatobiliary system, lung, and ovary; n=41 to 49 for each subgroup) was conducted. Each patient completed both the EQ-5D and FACT; scores were calculated using scoring functions for EQ-5D (Dolan, Shaw et al), an EQ-5D mapping function (Cheng et al) and FACT (Kind/Macran, Dobrez et al). ECOG performance status rated by physician was used to stratify patients by severity. The relative statistical efficiency (RE) of each algorithm to capture differences in severity was compared using ratios of F-statistics. **RESULTS:** The rank order of the scores generated by different scoring functions were fairly consistent across cancer subtype, with the lowest mean scores derived from FACT by Kind/Macran (0.52, hepatobiliary, to 0.57, colorectal), and highest mean scores using scoring by Dobrez et al (0.80, hepatobiliary, to 0.85, brain). Within each scoring function, no statistically significant differences in mean scores were found across cancer types. The Dolan algorithm resulted in largest differences in mean scores by severity (ECOG) grades for brain, breast, colorectal and ovarian cancer. The FACT UK societal algorithm by Kind et al had the largest RE for 3 of the cancers (breast, hepatobiliary, and ovarian cancer). **CONCLUSIONS:** Each scoring approach produced different preference-based scores within and across subtype of cancer; extrapolating from ability to discriminate levels of severity EQ-5D scoring functions generally provided scores that would extrapolate to larger QALY benefits compared to FACT-based approaches. No statistically significant differences in the utility scores were observed across the cancer types, but some differences could be considered meaningful; lack of power was a limitation.

PCN98

THE DEVELOPMENT OF AN INTERNATIONALLY-VALID CANCER-SPECIFIC MULTI-ATTRIBUTE UTILITY INSTRUMENT (MAUI) FROM THE EORTC CORE HEALTH-RELATED QUALITY OF LIFE (HRQOL) QUESTIONNAIRE, QLQ-C30

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OBJECTIVES: Preference-based measures have been derived from various descriptive HRQOL measures. A general 2-stage method has evolved: 1) an item from each domain of the HRQOL measure is selected to form a health state classification system (HSCS), and 2) a sample of health states is valued and an algorithm derived for estimating the utility of all possible health states. The outputs of these two stages represent a MAUI. Our aim was to adapt the first stage for the widely-used cancer-specific QLQ-C30, and apply it to a large, heterogeneous, international dataset as the first step in developing an internationally-valid cancer-specific MAUI. **METHODS:** Secondary analyses were conducted on a pooled dataset comprising QLQ-C30 responses plus demographic and clinical data from 2616 patients from eight countries, over 14 cancer sites, all stages, and all common cancer treatments. The established domain structure of the QLQ-C30 (physical, role, emotional, social and cognitive functioning, plus several symptoms) formed the underlying conceptual model for the MAUI. Generalisability of the conceptual model across cancer sites was tested with multi-group CFA. Items within each domain were then subjected to statistical scrutiny, including Rasch analysis for domains with sufficient items. **RESULTS:** CFA results supported the proposed conceptual model and its generalisability across cancer sites. Two items exhibited floor effects (>75% observations at lowest score), none exhibited misfit to the Rasch model, one exhibited disordered item response thresholds, and two exhibited differential item function by cancer site. These results, along with results for responsiveness and qualitative patient input (analyses underway) will be presented. **CONCLUSIONS:** The next stage of this research will obtain valuations for a range of health states defined by the HSCS from general population samples in various countries. The ability to determine a preference-based utility score from QLQ-C30 responses will facilitate cost-utility analysis in cancer trials which use the QLQ-C30.

PCN99

PREFERENCE-BASED ESTIMATES OF THE HEALTH UTILITY IMPACTS OF BREAST CANCER IN WOMEN AGES 18-44 IN THE UNITED STATES

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OBJECTIVES: Although less than 5% of breast cancers occur among women under 45, the impact on health-related quality of life (HRQOL) may be significant since these cancers strike earlier in a woman's life. This study addresses a gap in the literature on the health utility impacts of breast cancer among U.S. women ages 18-44. **METHODS:** Self-reported cancer history and HRQOL for US women were measured from the 2009 and 2010 Behavioral Risk Factor Surveillance System (BRFSS), a nationally representative population-based survey. BRFSS did not include preference-based measures of HRQOL, so Jia et al.'s (2011) mapping of Healthy Days (HRQOL-4) to the EQ-5D and Shaw et al.'s (2005) estimates of US utility weights were applied. The difference in health utilities and in Healthy Days (non-preference-weighted) was assessed using multivariate regression controlling for sociodemographics and major health risk factors. **RESULTS:** A total of 343 of 133,294 women ages 18-44 in the 2009-2010 BRFSS reported breast cancer. Unadjusted mean utility was .073 lower ($p<0.01$) among women with a history of breast cancer. Among women ages 45 and older, the difference was much smaller, 0.008 ($p<0.01$). Adjusting for sociodemographic factors and years since diagnosis, the decrease in health utility for breast cancer was 0.090 lower ($p<0.01$) for women 18-44; similar analysis of women ages 45 and older with breast cancer showed an estimated impact of 0.017 ($p<0.01$). Mean unhealthy days (physical, mental, or activity limitations) were also significantly lower in younger women with breast cancer. **CONCLUSIONS:** Although women 18-44 are a small fraction of breast cancer cases, the health utility impact at the individual level is substantial. Although the utility decrement is significant for women of all ages, the impact of breast cancer is 5-6 times greater in younger women. Age-specific utility values of breast cancer are critical for generating accurate results from cost-utility and modeling.

PCN100

WOMEN' PREFERENCES FOR CHEMOTHERAPY IN THE TREATMENT OF EARLY STAGE BREAST CANCER

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OBJECTIVES: Patient choice is increasingly recognized as a key factor in medical decision making process. This study aims to investigate preferences for adjuvant chemotherapy among women with early stage breast cancer in Taiwan. **METHODS:** Patient interviews were administered on women aged under 60 who sought treatment for stage I or II stage breast cancer at the outpatient department of two medical centers located in Taipei City, Taiwan. Five attributes of adjuvant chemotherapy was identified as the key determinants when making choices: frequency and administraton, length of treatment, cardiac toxicity, recurrence rate, and out-of-pocket payments.Survey questionnaire was designed based upon discrete choice experiments (DCEs). Preferences for 13 choice sets were elicited with opt-out option included. In total, 104 respondents were recruited by the end of 2011. Multinomial logit model was used to assess the relative value of product features and trade-off between attributes. Cluster analysis was used to Isolate women groups who place differing importance on different features. **RESULTS:** Descriptive statistics showed that most women were marred (77.2%) with mean age of 48.0. About half of the women were ful-time employed (52.6%) and 35.1 of them received years of education > 16 years (35.1%). Prelimanary regression analysis indicated that women significantly preferred shorter length of treatment, no cardiac toxicity, lower recurrence rate and lower out-of-pocket payment. **CONCLUSIONS:** The authorities concerned should incorporate patients' preferences into the existing decision making process when making reimbursement decision.